



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, Maryland 20910

Seafood Science & Technology Society

FROM:

Samuel W. McKen
Samuel W. McKen
Director, NOAA Seafood Inspection Program

SUBJECT:

NOAA Seafood Inspection Program Policy for Tasteless
Smoke Treated Frozen Tuna Products

Although unable to attend the meeting of October 9, 2000 to address in person our Program's policies regarding the agenda issue of the use of "tasteless smoke" in frozen tuna products, We are pleased to submit the following information about the development and scope of our Program's activities with this product.

Background

In 1997, NOAA became aware of a process that employs a filtered wood smoke that at least one processing company, Hawaii International Seafoods, Inc., termed "tasteless smoke" (TS). The purpose of its application is to retard the development of the brown color that rapidly occurs in tuna flesh after it has been cut. Although carbon monoxide (CO) is a component of the "tasteless smoke", its concentration is similar to that found in normal wood smoke. Unlike some other processes that result in the color of the product being enhanced or brightened and fixed through the direct use of CO at significantly higher concentrations and/or longer exposure times, this process, when used with appropriate controls, reportedly does not enhance the natural flesh color of tuna, and the color of the flesh eventually degrades over time. There is no evidence to suggest that "tasteless smoke" poses a health risk to the consumer from the ingestion of treated product. }

In May 1999, FDA issued Import Bulletin # 16B-95 which included instructions that tuna treated with "tasteless smoke" or CO should be:

"labeled as processed foods that have been treated with CO or TS,
not misrepresented as fresh frozen seafood by their label, and
near normal in flesh color."

Hawaii International has provided data to support their view that "tasteless smoke" is GRAS by submitting a GRAS notification document to FDA's Office of Premarket Approval. On March 10, 2000 FDA has responded that the agency has no questions at this time regarding the conclusion of Hawaii International that tasteless smoke is GRAS for use on raw tuna, before it is frozen, to preserve its taste, aroma, texture, and color. The agency has not, however, made its own determination regarding the GRAS status of this use of tasteless smoke. The FDA response further reiterates that any firm who markets tuna that has been preserved with tasteless smoke is responsible for ensuring that such tuna is neither adulterated nor misbranded under sections 402 and 403 of the Federal Food, Drug, and Cosmetic Act. }



NOAA Seafood Inspection Program Policy

NOAA has implemented a policy within its voluntary Seafood Inspection Program to inspect and certify only tuna products treated with "tasteless smoke," and only those products that originate from firms that NOAA has verified employ acceptable process controls. The products must also be in compliance with all other applicable legal and regulatory requirements.

NOAA Verification Protocol

The verification protocol encompasses several parameters. First, the firm's HACCP and sanitation operation are evaluated for compliance to FDA regulations, in particular 21CFR Part 123. Color readings are taken of a sampling of tuna steaks using a HunterLab color difference meter. Thirty steaks are sampled with readings taken after the first cut, after exposure to the gas, and at thirty-day intervals for the next five months. After frozen storage, at each of the thirty-day intervals, the steaks are thawed and stored chilled under conditions similar to that found in retail stores. Each day for the next five days, the steaks are analyzed for color readings and sensory indicators. All readings are charted and analyzed using HunterLab software. Photographs are taken at each stage of one steak that has been treated and a control.

Samples of the gas are also taken at the source and analyzed for various constituents, including carbon monoxide. Histamine analyses are also performed on representative product samples.

Audits of production facilities are performed twice per year.

Additional Activities

In an effort to determine criteria to objectively describe "near normal in flesh color", NOAA has collected nearly 1200 data records. These data will be used to develop a process/color specification that will be evaluated with industry assistance during the next year. Additional tests are planned to evaluate the effect of TS and CO on tuna at varied stages of deterioration.